INDEXES

Volume 4, 1975

The indexes in this issue cover Volumes 1—4

(Figures in bold type refer to the volume number)

INDEX OF AUTHORS

Ahluwalia, J. C., 2, 203 Allen, N. S., 4, 533 Baker A. D., 1, 355 Beattie, I. R., 4, 107 Bell, R. P., 3, 513 Bentley, P. H., 2, 29 Berkoff, C. E., 3, 273 Bird, C. W., 3, 309 Blandamer, M. J., 4, 55 Braterman, P. S., 2, 271 Breslow, R., 1, 553 Brown, K. S., jun., 4, 263 Brundle, C. R., 1, 355 Buchanan, G. L., 3, 41 Burdett, J. K., 3, 293 Burgess, J., 4, 55 Burrows, H. D., 3, 139 Cadogan, J. I. G., 3, 87 Carabine, M. D., 1, 411 Cardin, D. J., 2, 99 Carless, H. A. J., 1, 465 Çetinkaya, B., 2, 99 Chamberlain, J., 4, 569 Chatt, J., 1, 121 Chivers, T., 2, 233 Collins, C. J., 4, 251 Corfield, G. C., 1, 523 Cornforth, J. W., 2, 1 Cotton, F. A., 4, 27 Coulson, E. H., 1, 495 Coyle, J. D., 1, 465; 3, 329; 4, 523 Cramer, R. D., 3, 273 Cross, R. J., 2, 271 Dack, M. R. J., 4, 211 Dainton, F. S., 4, 323 Doyle, M. J., 2, 99 Drummond, I., 2, 233 Evans, D. A., 2, 75 Fenby, D. V., 3, 193 Ferguson, L. N., 4, 289 Fry, A., 1, 163

Green, C. L., 2, 75 Greenwood, N. N., 3, 231 Griffiths, J., 1, 481 Grossert, J. S., 1, 1 Groves, J. K., 1, 73 Guilford, H., 2, 249 Gutteridge, N. J. A., 1, 381 Haines, R. J., 4, 155 Hall, G. G., 2, 21 Hall, L. D., 4, 401 Halliwell, H. F., 3, 373 Harmony, M.D., 1, 211 Hartley, F. R., 2, 163 Hartshorn, S. R. 3, 167 Henderson, J. W., 2, 397 Hepler, L. G., 3, 193 Horton, E. W., 4, 589 Hudson, M. F., 4, 363 Isbell, H. S., 3, 1 Jamieson, A. M., 2, 325 Johnson, A. W., 4, 1 Jotham, R. W., 2, 457 Kemp, T. J., 3, 139 Kennedy, J. F., 2, 355 Kennewell, P. D., 4, 189 Kenny, A. W., 4, 90 Kresge, A. J., 2, 475 Lappert, M. F., 2, 99 Leigh, G. J., 1, 121; 4, 155 Leznoff, C. C., 3, 65 Lindoy, L. F., 4, 121 Linford, R. G., 1, 445 Lipscomb, W. N., 1, 319 Lynch, J. M., 3, 309 McKellar, J. F., 4, 533 McKervey, M. A., 3, 479 Mackie, R. K., 3, 87 Maitland, G. C., 2, 181 Maret, A. R., 2, 325

Mason, R., 1, 431 Mayo, B. C., 2, 49 Meadowcroft, A. E., 4, 99 Menger, H. W., 2, 415 Midgley, D., 4, 549 Moore, H. W., 2, 415 Mulheirn, L. F., 1, 259 Munn, A., 4, 87 Newman, J. F., 4, 77 North, A. M., 1, 49 Page, M. I., 2, 295 Pletcher, D., 4, 471 Poliakoff, M., 3, 293 Ramm, P. J., 1, 259 Rattee, I. D., 1, 145 Redl, G., 3, 273 Rouvray, D. H., 3, 355 Sarma, T. S., 2, 203 Satchell, D. P. N., 4, 231 Satchell, R. S., 4, 231 Simpson, T. J., 4, 497 Smith, E. B., 2, 181 Smith, K., 3, 443 Smith, K. M., 4, 363 Stacey, M., 2, 145 Suckling, C. J., 3, 387 Suckling, K. E., 3, 387 Sutherland, R. G., 1, 241 Sutton, D., 4, 443 Taylor, J. B., 4, 189 Thomas, T. W., 1, 99 Thompson, M., 1, 355 Toennies, J. P., 3, 407 Tolman, C. A., 1, 337 Twitchett, H. J., 3, 209 Underhill, A. E., 1, 99 Walker, I. C., 3, 467 Waltz, W. L., 1, 241 Ward, I. M., 3, 231 White, A. J., 3, 17 Whitfield, R. C., 1, 27

INDEX OF TITLES

Acylation by ketens and isocyanates, a mechanistic comparison 4, 231	— of the olefin metathesis reaction, 4, 155
Acylation, Friedel-Crafts, of alkenes, 1, 73	CENTENARY LECTURE. Biomimetic chemistry, 1, 553
Adamantane rearrangements, 3, 379	CENTENARY LECTURE. Quadruple
Affinity Chromatography, chemical aspects of, 2, 249	bonds and other multiple metal to metal bonds, 4, 27
Alkali-metal complexes in aqueous solution, 4, 549 Alkenes, the Friedel-Crafts acylation	CENTENARY LECTURE. Rotationally and vibrationally inelastic scattering of molecules, 3, 407
of, 1,73	CENTENARY LECTURE. Three-dimen-
Aphids and scale insects, their chem-	sional structures and chemical mechanisms of enzymes, 1, 319
Application of electrochemical tech-	
niques to the study of homogenous chemical reactions, 4, 471	Charge transfer and hydrogen bond complexes, calorimetric investigations of, 3, 193
Aqueous mixtures, kinetics of reac-	Chemical applications of advances in
tions in, 4, 55	Fourier transform spectroscopy,
Aryldiazonium cations, co-ordination chemistry of, 4, 443	- aspects of affinity chroma-
Atmosphere, interactions in, of drop-	tography, 2, 249
lets and gases, 1, 411	- of glycoproteins, proteo-
Azidoquinones and related com-	glycans, and carbohydrate-protein
pounds, chemistry of, 2, 415	complexes of human tissues, 2, 355
Azobenzene and its derivatives, photo-	Chemicals in rodent control, 1, 381
chemistry of, 1, 481	Chemistry—a topological subject,
Bile pigments, 4, 363	2, 457 — of aphids and scale insects, 4, 263
Biomimetic chemistry, 1, 553	— of azidoquinones and related
Biosynthesis of sterols, 1, 259	compounds, 2, 415
Biosynthetic studies, carbon-13 nuclear	— of dyeing, 1, 145
magnetic resonance in, 4, 497	of homonuclear sulphur species,
Bredt's rule, 3, 41	2, 233
Brønsted relation – recent developments, 2, 475	— of the production of organic isocyanates, 3, 209
Calorimetric investigations of hydro-	— of transition-metal carbene com-
gen bond and charge transfer	plexes and their role as reaction
complexes, 3, 193	intermediates, 2, 99
Cancer and chemicals, 4, 289	Chirality in carbonium ions, car-
Carbohydrate-protein complexes, gly-	banions, and radicals, 2, 397
coproteins, and proteoglycans, of	Chromatography, affinity, chemical
human tissues, chemical aspects	aspects of, 2, 249
of, 2, 355	Cis- and trans-effects of ligands, 2, 163
Carbon-13 nuclear magnetic resonance	Complexes, alkali-metal, in aqueous
in biosynthetic studies, 4, 497	solution, 4, 549
Carbonium ions, carbanions, and	Conformation of rings and neigh-
radiales, chirality in, 2, 397	bouring group effects, development
Carbonyl compounds, photochemistry of, 1, 465	of Haworth's concepts of, 3, 1
~	Conformational studies on small mole- cules, 1, 293
Catalysis, homogenous, and organo- metallic chemistry, the 16 and 18	cules, 1, 293 Contribution of ion-pairing to 'mem-
electron rule in, 1, 337	ory effects', 4, 251
	-, -, -, -, -, -, -, -, -, -, -, -, -, -

Co-ordination chemistry of aryl- diazonium cations: aryldiazenato (arylazo) complexes of transition	Friedel-Crafts acylation of alkenes, 1, 73
metals, and the arvidiazenato-	Gas-phase kinetics of the difluoro- amino-radical, 3, 17
nitrosyl analogy, 4, 443 Cyclopolymerization, 1, 523	Gases and droplets, interactions in
Dielectric relaxation in polymer solu-	the atmosphere of, 1, 411
tions, 1, 49	Glycoproteins, proteoglycans, and carbohydrate-protein complexes of
Difluoroamino-radical, gas-phase kinetics of, 3, 17	human tissues, chemical aspects of,
Droplets and gases, interactions in	2, 355
the atmosphere of, 1, 411	Growth of computational quantum
the atmosphere of, Drug design, quantitative, Dyeing, chemistry of, 1, 411 3, 273 1, 145	chemistry from 1950 to 1971, 2, 21
Dyeing, chemistry of, 1, 145	Handling toxic chemicals-environ-
Echinoderms, natural products from,	mental considerations, 4, 77
I, I	HAWORTH MEMORIAL LECTURE. The
Education, chemical, a reassessment of research in, 1, 27	consequences of some projects
Electrochemical techniques, appli-	initiated by Sir Norman Haworth,
cation of to study of homogenous	2, 145 HAWORTH MEMORIAL LECTURE. The
chemical reactions, 4, 471	Haworth-Hudson controversy and
Electron as a chemical entity, 4, 323	the development of Haworth's con-
Electron scattering spectroscopy,	cepts of ring conformation and of
threshold, 3, 467 —— spectroscopy, 1, 355 Floatronbilic grounding substitions	neighbouring group effects, 3, 1
Electrophilic aromatic substitions,	Health hazards to workers from indus-
non-conventional, and related	trial chemicals, 4, 82
reactions, 3, 167	Homogenous catalysis, and organo- metallic chemistry, the 16 and 18
Elimination reactions, isotope effect	electron rule in. 1. 337
studies of, 1, 163	electron rule in, 1, 337 Homogenous chemical reactions,
Energetics of neighbouring group	application of electrochemical tech-
participation, 2, 295	niques to the study of, 4, 471
Enumeration methods for isomers, 3, 355	Hydrocarbon formation by micro-
Environmental protection in the dis-	organisms, 3, 309 Hydrogen bond and charge transfer
tribution of hazardous chemicals	complexes, calorimetric investiga-
4, 99	tions of, 3, 193
Enzymes in organic synthesis, 3, 387	Hydrogen isotope effects, kinetic,
—, the logic of working with, 2, 1 —, three-dimensional structures and	recent advances in the study of,
chemical mechanisms of, 1, 319	3, 513
Experimental studies on the structure	Hydrophobic solutes, experimental studies on the structure of aqueous
of aqueous solutions of hydro-	solutions of, 2, 203
phobic solutes, 2, 203	2, 21
FARADAY LECTURE. The electron as	Importance of solvent internal pressure
a chemical entity, 4, 323 Fixation, of nitrogen, 1, 121	and cohesion to solution phenomena
Fixation, of nitrogen, 1, 121	Infrared and Raman vibrational
Forces between simple molecules, 2, 181	spectroscopy in inorganic chemistry,
Formation of hydrocarbons by micro-	4, 107
organisms, 3, 309	Insect attractants of natural origin,
Fourier transform spectroscopy, chem-	2, 75
ical applications of advances in,	Interactions in the atmosphere of
4, 569	droplets and gases, 1, 411

9

er

1-13

c.

f,

3

al

us

3

re

11

al

07

in.

75

of

Interactions, metal-metal, in transitionconformation. development metal complexes containing infinite Haworth's concepts of. 3, 1 participation, energetics of, 2, 295 chains of metal atoms, 1, 99 1, 121 agricultural Introducing a new Nitrogen fixation. chemical, 4, 77 Non-conventional electrophilic aro-Ion-pairing, contribution to 'memory matic substitutions and related effects'. reactions, 3, 167 Isocyanates, and ketens, a mechanistic Nuclear magnetic resonance, carboncomparison of acylation by, 4, 231 13, in biosynthetic studies, 4.49 spectroscopy, lanthanide shift -, organic, chemistry of the pro-3, 209 duction of. reagents in, 2, 49 Isomer enumeration methods, 3, 355 -: spin-lattice relaxation, 4, 401 NYHOLM MEMORIAL LECTURE. Isotope effect studies of elimination Forreactions. ward from Nyholm's Marchon Lecture. 3, 373 Ketens and isocyanates, a mechanistic comparison of acylation by, 4, 231 Oelfin metathesis and its catalysis, Kinetics, gas-phase, of the difluoro-4, 155 amino-radical, Olefinic compounds, photochemistry of reactions in aqueous mixtures, 3, 329 Organoboranes as reagents for organic Lanthanide shift reagents in nuclear 3, 443 synthesis, preparation of, magnetic resonance spectroscopy, Organometallic chemistry and homogenous catalysis, the 16 and 18 Laser light scattering, quasielastic, electron rule in, 1, 337 2, 325 Organo-transition-metal complexes: 3, 293 Lasers, tunable, stability, reactivity, and Ligands, cis- and trans-effects of, correlations. 2, 271 2, 163 LIVERSIDGE LECTURE. Recent advances PEDLER LECTURE. Porphyrins and in the study of kinetic hydrogen related ring systems, isotope effects, Phase boundaries, reactivity of organic Macrocyclic ligands, synthetic, transmolecules at. Phosphorous compounds, tervalent, ition-metal complexes of, 4, 421 Mechanisms, chemical, and threein organic synthesis. 3, 87 dimensional structures of enzymes, Photochemistry of azobenzene and its derivatives, 1, 481 - of carbonyl compounds, 1, 465 Meldola Medal Lecture. Chemical aspects of glycoproteins, proteo-glycans, and carbohydrate-protein — of olefinic compounds, 3, 329 of organic sulphur compounds 4, 523 complexes of human tissues, 2, 355 3, 139 — of the uranyl ion, Metalloboranes and metal-metal - of transition-metal co-ordination bonding, Metal-metal bonding and metallocompounds—a survey, 1, 241 Photodegradation and stabilization boranes, 3, 231 bonds, multiple of commercial polyolefins, 4, 533 (especially quadruple), Polymer solutions, dielectric relaxation in. 1, 49 interactions in transition-metal supports, insoluble, use in complexes containing infinite chains of metal atoms, organic chemical synthesis, 3, 65 1, 99 Polyolefins, commercial, photodegradation and stabilisation of, 4, 533 Natural products from echinoderms, Porphyrins and related ring systems, Neighbouring-group effects and ring 4, 1

Description of organologous	threshold alastran seattering
Preparation of organoboranes: reagents for organic synthesis, 3, 443	—, threshold electron scattering, 3, 467
Prostaglandins, tomorrow's drugs,	Spin-lattice relaxation: A fourth di-
4, 589	mension for proton n.m.r. spectro-
Prostanoids, total synthesis of, 2, 29	scopy, 4, 401
Our develo hands and other multiple	Stability, reactivity, and orbital cor-
Quadruple bonds and other multiple metal to metal bonds, 4, 27	relations of organo-transition-metal
Quantitative drug design, 3, 273	complexes, 2, 271 Sterols, biosynthesis of, 1, 259
Quantum chemistry, computational,	Structure of aqueous solutions of
growth of from 1950 to 1971, 2, 21	hydrophobic solutes, experimental
mechanical tunnelling in chem-	studies on, 2, 203
istry, 1, 211	Sulphoximides, 4, 189
Quasielastic laser light scattering,	Sulphur compounds, organic, photo-
2, 325	chemistry of, 4, 523
Radioactive and toxic wastes: a	of, species, homonuclear, chemistry
comparison of their control and	Surface energy of solids, 1, 445
disposal, 4, 90	Syntheses, total, of prostanoids, 2, 29
Raman and infrared vibrational spec-	Synthesis, organic, enzymes in, 3, 387
troscopy in inorganic chemistry,	-, organic, preparation of organo-
4, 107	boranes as reagents for, 3, 443
Reactivity of organic molecules at phase boundaries, 1, 229	—, organic, tervalent phosphorus compounds in, 3, 87
Recent advances in the study of	-, organic, use of inorganic poly-
kinetic hydrogen isotope effects,	mer supports in, 3, 65
3, 513	mer supports m,
Research in chemical education: a	
reassessment, 1, 27	TATE AND LYLE LECTURE. Spin-lattice
ROBERT ROBINSON LECTURE. The logic of working with enzymes, 2, 1	relaxation: A fourth dimension for proton n.m.r. spectroscopy, 4, 401
Rodent control, chemicals in, 1, 381	Teaching of chemistry in schools,
Rotationally and vibrationally	some recent developments in, 1, 495
inelastic scattering of molecules,	Tervalent phosphorus compounds in
3, 407	organic synthesis, 3, 87
Coale insects and ankide abanistary of	Three-dimensional structures and
Scale insects and aphids, chemistry of, 4, 263	chemical mechanisms of enzymes, 1, 319
16 and 18 Electron rule in organo-	Threshold electron scattering spectro-
metallic chemistry and homogenous	scopy, 3, 467
catalysis, 1, 337	TILDEN LECTURE. Valence in tran-
Small molecules, conformation studies	sition-metal complexes, 1, 431
on, 1, 293	Topological subject—chemistry, 2, 457
Solids, surface energy of, 1, 445 Solution phenomena, the importance	Transition-metal carbene complexes, chemistry and role as reaction
of solvent internal pressure and	intermediates, 2, 99
cohesion, 4, 211	— complexes, containing infinite
Solvent internal pressure and cohesion,	chains of metal atoms, metal-
importance to solution phenomena,	metal interactions in, 1, 99
4, 211	
	complexes of synthetic macro-
	cyclic ligands. 4, 421
	cyclic ligands. 4, 421
Some recent developments in chemistry teaching in schools, 1, 495 Spectroscopy, electron, 1, 355	cyclic ligands, 4, 421 — complexes, valence in, 1, 431 — co-ordination compounds,
	cyclic ligands. 4, 421

Index

n e

9 -1

- Uranyl ion, photochemistry of, 3, 139 Use of insoluble polymer supports in organic chemical synthesis, 3, 65
- Valence in transition-metal complexes, 1, 431
- Vibrational infrared and Raman spectroscopy in inorganic chemistry, 4, 107
- Vibrationally and rotationally inelastic scattering of molecules, 3, 407